

Work Order ID 75590

75590

U/R Page 1

Wednesday, October 26, 2011 10:03:49 AM

Item ID: D412-742-043

Accept

N9000040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Replacement Float Skidtube

Start Date: 10/26/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 11/9/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: ME Date: 11-10-26

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3391

H U/R

CP 11.11.07

100

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

If D412-742-043 is a W/O on it's own,
Photocopy bluefile and create labels per PPP D412-742-043

CHG 004

CHG 604

CHG 605

Using D3391 Rev H

CHG 605

CP 11.11.08

W/O: 7590

WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
11.11.15		USE D4095-041/-043 WEARSHOES PER DSI 9517 Rev. B	gll	11/11/28	X1	Q 11.11.15 Q51042	M/nd 11.11.28
11.11.26		USE WEARSHOE / WEARPADS: D4095-041 (INSTEAD OF D3564-1), D4095-051 (INSTEAD OF D3564-13) D4095-043 (" OF D3564-3) , D4095-044 (" OF D3564-3537-1) D4095-045 (" OF D3564-5) , D4095-047 (" OF D3537-7) TUBE IS CHG 605	gll	11/11/26	1	Q 11.11.26 Q51042	M/nd 11.11.28

Part No: D412-743-043 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

*NOTE: Date & initial all entries

Work Order ID 75590

75590

Page 2

Wednesday, October 26, 2011 10:03:49 AM

Item ID: D412-742-043

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Replacement Float Skidtube

Start Date: 10/26/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 11/9/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110	HandFinishing	0.00							
110									
HandFinish	Memo	0.00							
Hand Finishing	1-Install tubes together and seal them all the way around using Sikaflex 241/291. Ensure tube ends line-up with saddle holes for proper alignment. using 7/16" "T" Pins. A/RSikaflex-241/-291 11119443 Expiry date: 12/01								
	2-Install wearplates as per Dwg D3391. Ensure that plastic washers are against wearplate, then topped with the SS washer. Seal all bolts with sikaflex except ones with inserts on inside of tube ,hand tighten only bolts with no sikaflex.								
	A/RSikaflex-241/-291 11119443 Expiry date: 12/01								
	3-Remove "T" pins once sikaflex is dry.								
	4-Coat all exposed hardware with LPS Procyon. Remove any excess off with MEK degreaser. A/RLPS Procyon 11114596								

1 of 128

★ SEE W/D CHG OVER

★ SEE W/D CHG
OVER

W/O: 755A0		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
11.11.22	110	INSTALL WEARPLATES PER D3391 Rev. I USING SHORTER BOLTS PER DWG	JA	11/11/28	X1	PS/1442 11.11.22	11/11.28

Part No: D412-742-043 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 75590

75590

Page 3

Wednesday, October 26, 2011 10:03:49 AM

Item ID: D412-742-043

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Replacement Float Skidtube

Start Date: 10/26/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 11/9/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Run Start ***NR1***

Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop ***NR2***

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC5- Inspect part completeness to step on W/O	0.00							
120									
QC	Memo	0.00							
Quality Control									
130		0.00							
130	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D412-742-043								
	Location:								
	PPP Rev: <u>PPP 70 581</u>								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control									

11 - 11 - 28 ①

11/11/25 ②

11/12/01 ③

ME
11-11-30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, October 26, 2011 10:03:49 A

Page 1

Work Order ID: 75590

Parent Item: D412-742-043

Parent Item Name: Replacement Float Skidtube

Start Date: 10/26/2011

Required Date: 11/9/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev A05.10.13New Issue KJ/JLM
 IPP Rev B06.02.13ECN 773 dwg @ rev.D EC
 IPP Rev:C 07-05-28 As per Rev F JLM
 IPP Rev:D 07-12-04 ECN 1072 DD verified by:JLM
 IPP Rev:E 08-09-08 ecn 08-510 DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

AN3C4A BOLT		Purchased	No			110	Each	2,547.0000	24	24			
----------------	--	-----------	----	--	--	-----	------	------------	----	----	--	--	--

Location	Loc Qty	Loc Code
----------	---------	----------

ST350	2547	
117313	2	
117688	5	
117872	22	
118112	16	
118451	2	
118706	500	
118838	1000	
119328	1000	

AN3C6A BOLT		Purchased	No			110	Each	220.0000	12	12			
----------------	--	-----------	----	--	--	-----	------	----------	----	----	--	--	--

Location	Loc Qty	Loc Code
----------	---------	----------

FP-A	1	
111982	1	
ST351	219	
111982	2	
116419	23	
116549	2	
116704	12	
117619	10	
117688	1	
117872	5	
118422	164	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, October 26, 2011 10:03:49 A

Page 2

Work Order ID: 75590

Parent Item: D412-742-043

Parent Item Name: Replacement Float Skidtube

Start Date: 10/26/2011

Required Date: 11/9/2011

Start Qty: 1.00

Required Qty: 1.00

AN3C7A Purchased No
BOLT Qty(4)

110 Each 147.0000

~~8~~ ~~8~~ ~~11/1/23~~

Location	Loc Qty	Loc Code
ST351	147	
113149	14	
116169	1	
117313	10	
117619	12	
117688	34	
118422	76	

AN960C10L Qty(38) NAS1149C0332R Purchased No
washer

110 Each 0.0000

~~44~~ ~~44~~ 11/1/23 (x44) 11/1/23

D3391-021 N A pulled on 02/23 Manufactured No
Fwd Tube Assembly

110 Each 0.0000

1 B71456 (x1) 11/1/22

D3391-023 Manufactured No
Mid Tube Assembly

110 Each 0.0000

1 B71464 (x1) 11/1/22

D3391-025 Manufactured No
Aft Tube Assembly

110 Each 0.0000

1 B73018 (x1) 11/1/22

D3564-1 D4095-041 Manufactured No
Wearshoe

110 Each 8.0000

1 B76047 (x1) 11/1/22

Location	Loc Qty	Loc Code
FG	2	
33798	2	
FP019	6	
72508	6	

D3564-3 D4095-043 Manufactured No
Wearshoe

110 Each 14.0000

1 B76048 (x1) 11/1/22

Location	Loc Qty	Loc Code
FG	2	
33764	2	
FP	9	
71656	9	
FP019	3	
64748	3	

Wednesday, October 26, 2011 10:03:49 AM

Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, October 26, 2011 10:03:49 A

Page 3

Work Order ID: 75590

Parent Item: D412-742-043

Parent Item Name: Replacement Float Skidtube

Start Date: 10/26/2011

Required Date: 11/9/2011

Start Qty: 1.00

Required Qty: 1.00

~~D3564-5~~ Manufactured No
Wearshoe

D4095-045

110 Each 16.0000

1 376050 (x1) 21 11/11/12

Location	Loc Qty	Loc Code
FG	2	
34806	2	
FP19	14	
73330	14	

~~D3566-1~~ Manufactured No
Gasket

NA

9/11/15

110 Each 45.0000

2 2

Location	Loc Qty	Loc Code
FP002	43	
73303	17	
74518	26	
FP015	2	
68924	2	

~~D3566-5~~ Manufactured No
Gasket

110 Each 36.0000

1 1

Location	Loc Qty	Loc Code
FP002	34	
74387	12	
75069	22	
FP015	2	
72849	2	

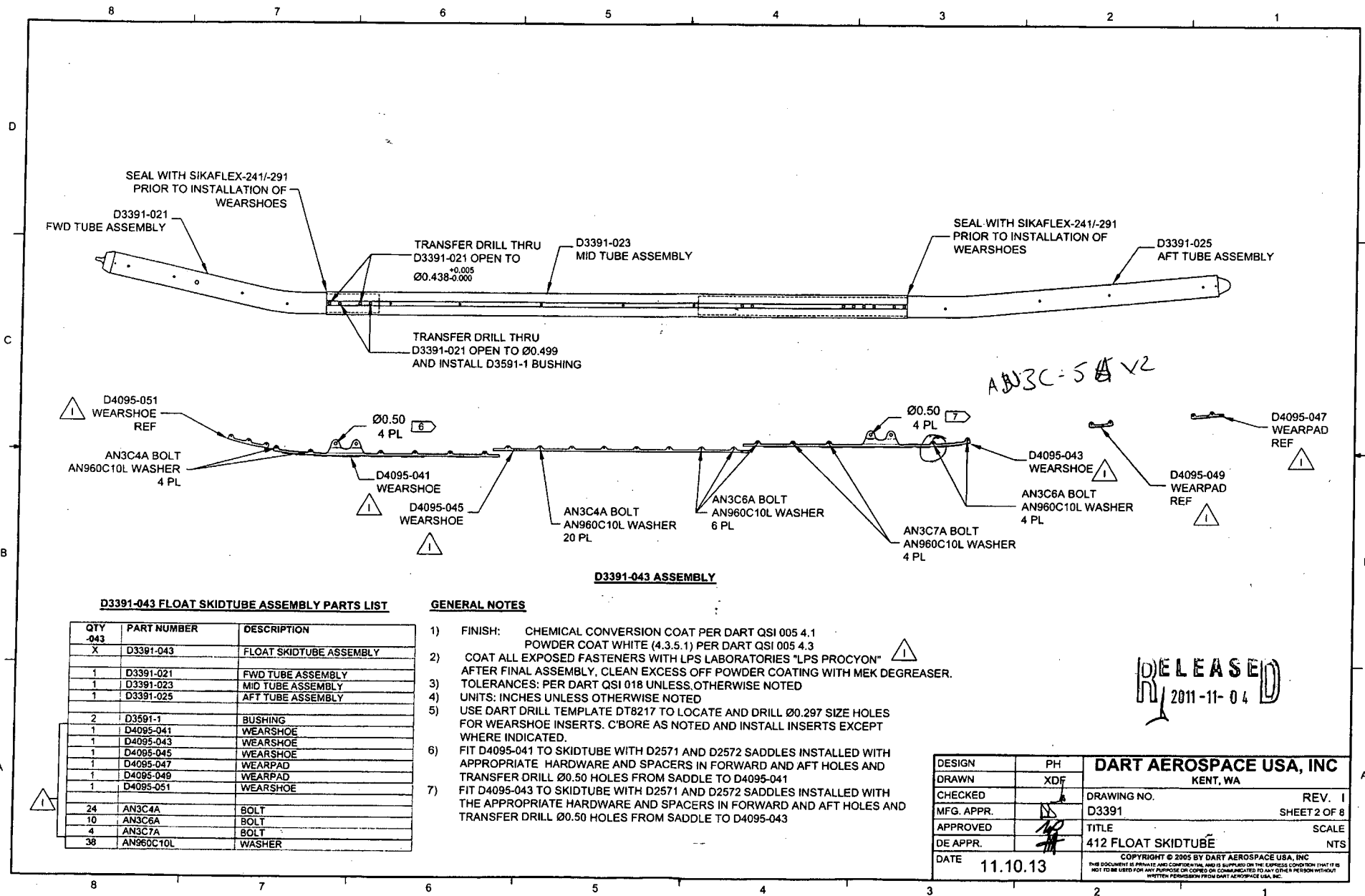
W/O: 75590		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
11/11/23	110	USE AN3CSA BOLTS INSTEAD OF 6A BOLTS, 2 PL B/N M118451	MA	11/11/24	X2	11.11.23 [Signature]	11/11/28 [Signature]

Part No: D412743-043 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



8

7

6

5

4

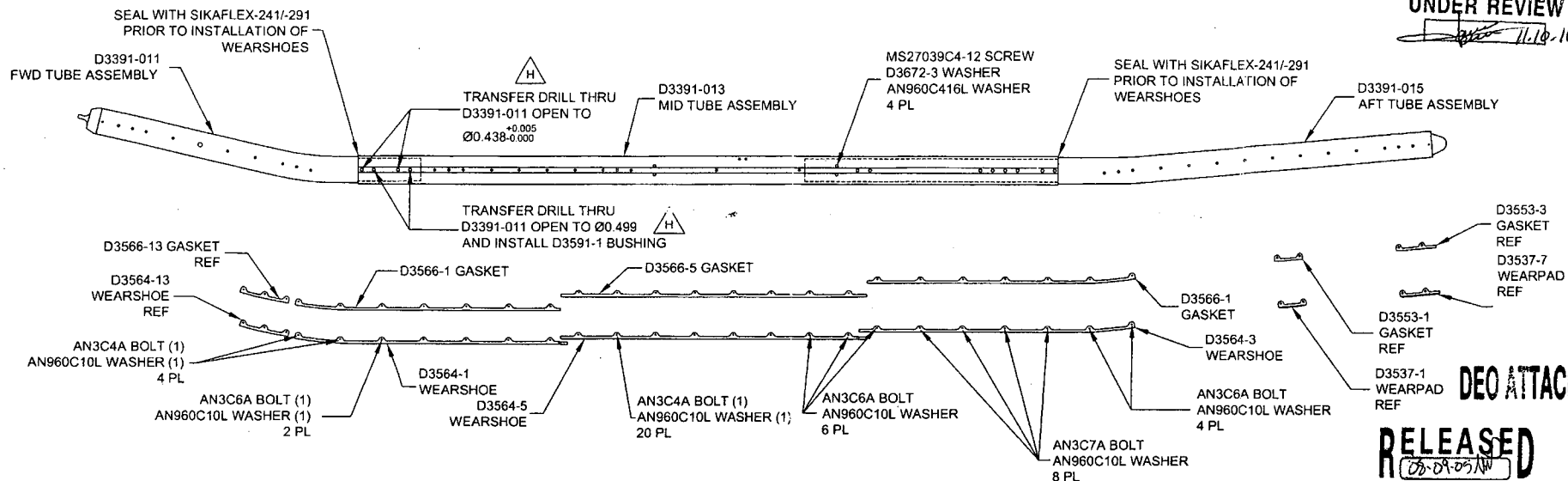
3

2

1

UNDER REVIEW

11.10.11



D3391-041 ASSEMBLY

D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
1	D3391-011	FWD TUBE ASSEMBLY
1	D3391-013	MID TUBE ASSEMBLY
1	D3391-015	AFT TUBE ASSEMBLY
1	D3564-1	WEARSHOE
1	D3564-3	WEARSHOE
1	D3564-5	WEARSHOE
2	D3566-1	GASKET
1	D3566-5	GASKET
2	D3591-1	BUSHING
4	D3672-3	WASHER
24	AN3C4A	BOLT
12	AN3C8A	BOLT
8	AN3C7A	BOLT
44	AN960C10L	WASHER
4	MS27039C4-12	SCREW
4	AN960C416L	WASHER

GENERAL NOTES

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH
AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH
LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS
OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES
FOR WEARSHOE INSERTS. C-BORE AS NOTED AND INSTALL INSERTS EXCEPT
WHERE INDICATED.

H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.08.10
A	NEW ISSUE	PH	05.02.07
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE USA, INC PORT HADLOCK, WA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 1 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

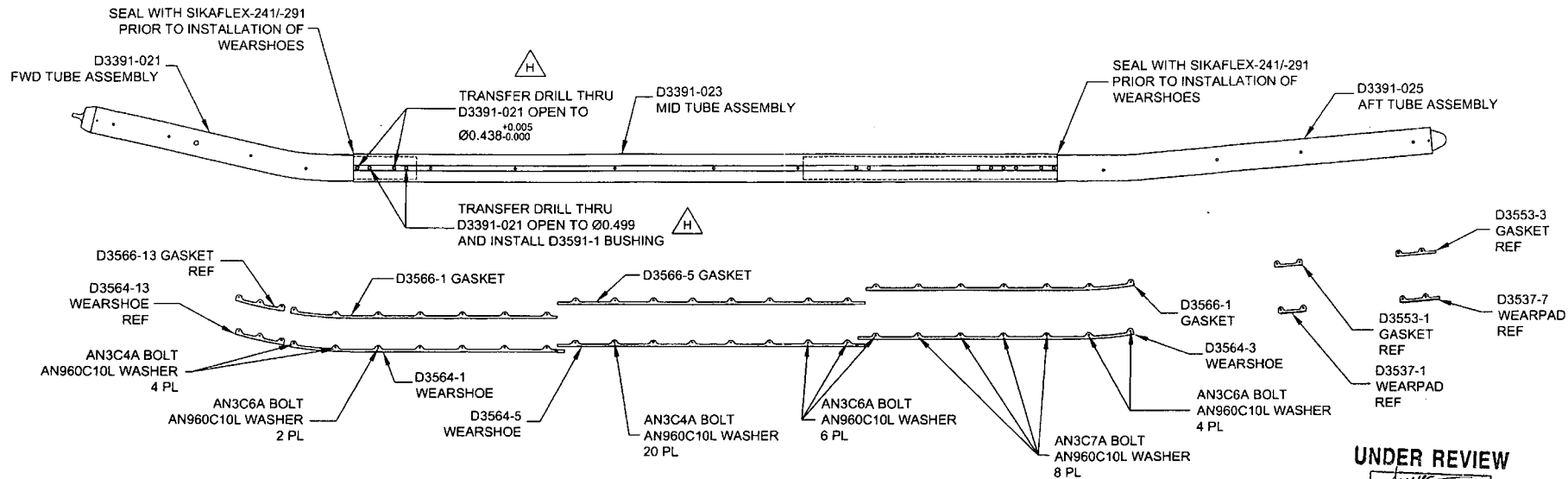
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3391-043 ASSEMBLY

D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
1	D3391-043	Float Skid Tube Assembly
1	D3391-021	FWD Tube Assembly
1	D3391-023	MID Tube Assembly
1	D3391-025	AFT Tube Assembly
1	D3564-1	Wearshoe
1	D3564-5	Wearshoe
1	D3564-13	Wearshoe
2	D3566-1	Gasket
1	D3566-5	Gasket
2	D3566-13	Gasket
24	AN3C4A	Bolt
12	AN3C6A	Bolt
8	AN3C7A	Bolt
44	AN960C10L	Washer

GENERAL NOTES

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO. D3391	REV. H
MFG. APPR.			SHEET 2 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	<small>COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

UNDER REVIEW

DEO ATTACHED

RELEASED
08-09-25-11

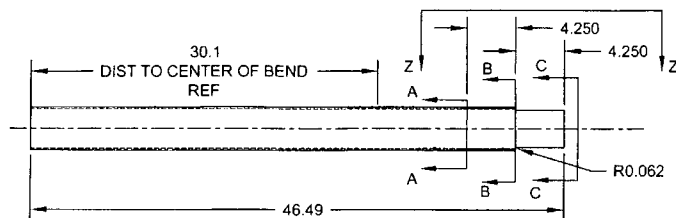
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

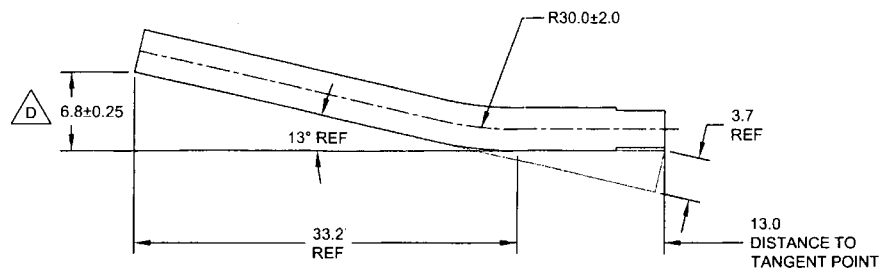
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

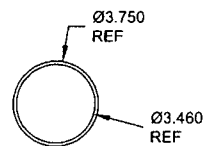
NOTE: Date & initial all entries



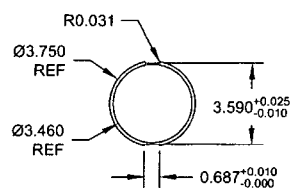
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



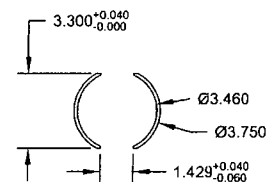
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



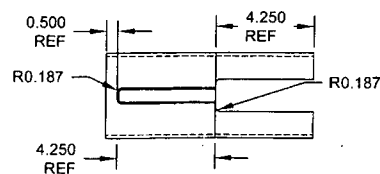
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X



SECTION C-C
SCALE 2X



VIEW Z-Z
SCALE 2X

UNDER REVIEW
11.20.11

DEO ATTACHED
RELEASED
28.05.11

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 3 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

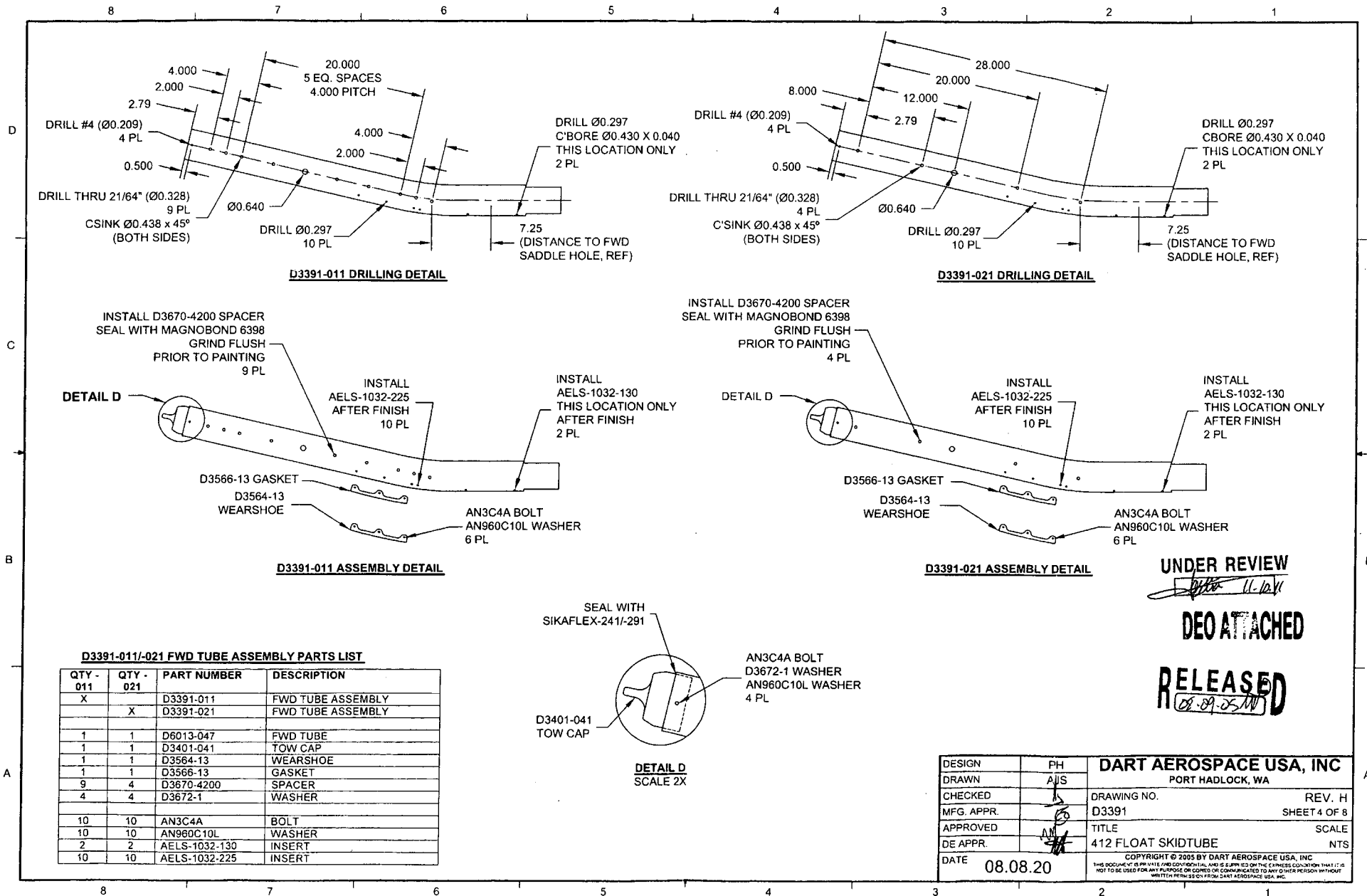
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

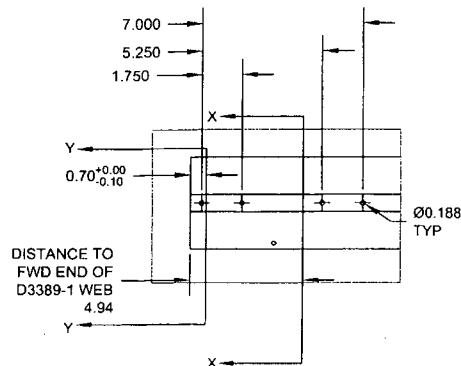
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

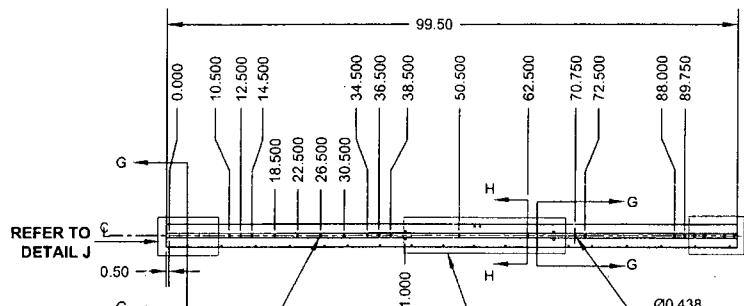
NOTE: Date & initial all entries

8 7 6 5 4 3 2 1

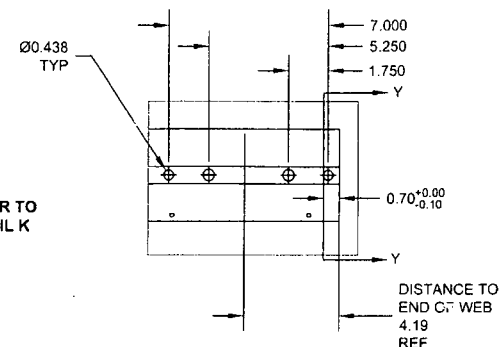


DETAIL J
SCALE 4X

DRILL THRU 21/64" (Ø0.328)
CSINK Ø0.438 X 45° (BOTH SIDES)
12 PL



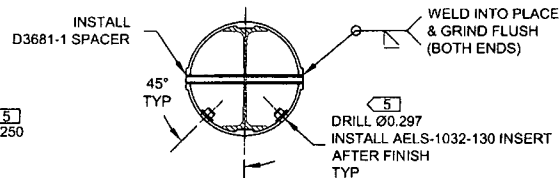
D3391-013 ASSEMBLY DETAIL



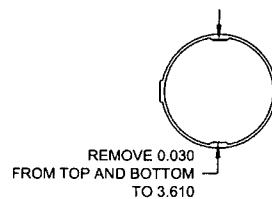
DETAIL K
SCALE 4X



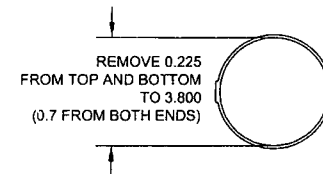
SECTION G-G
SCALE 5X



SECTION H-H
SCALE 5X



SECTION X-X
SCALE 5X

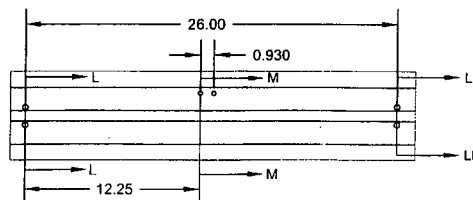


SECTION Y-Y
SCALE 5X

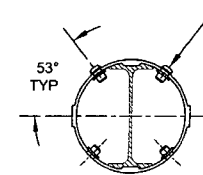
UNDER REVIEW
11-18-11

D3391-013 MID TUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
-013		
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-1	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS4-428-165	INSERT
4	AN960C10L	WASHER
4	AN960C416L	WASHER
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW

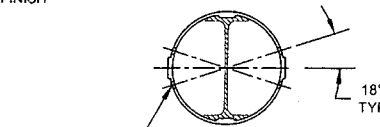


DETAIL E
SCALE NONE



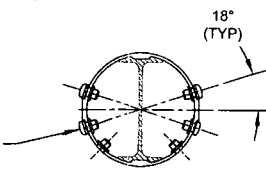
SECTION M-M
SCALE 5X

DRILL Ø0.297
INSTALL AELS-1032-130 INSERT
MS27039C1-09 SCREW
D3672-1 WASHER
AN960C10L WASHER
AFTER FINISH
4 PL



SECTION LL-LL
SCALE 5X

DRILL Ø0.391
INSTALL ALS4-428-165 INSERT
MS27039C4-08 SCREW
D3672-3 WASHER
AN960C416L WASHER
AFTER FINISH
4 PL



SECTION L-L
SCALE 5X

DEO ATTACHED

RELEASED
08-08-20

D3391-013 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- 3) WELDING: PER DART QSI 004

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	ALIS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 5 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC	

8 7 6 5 4 3 2 1

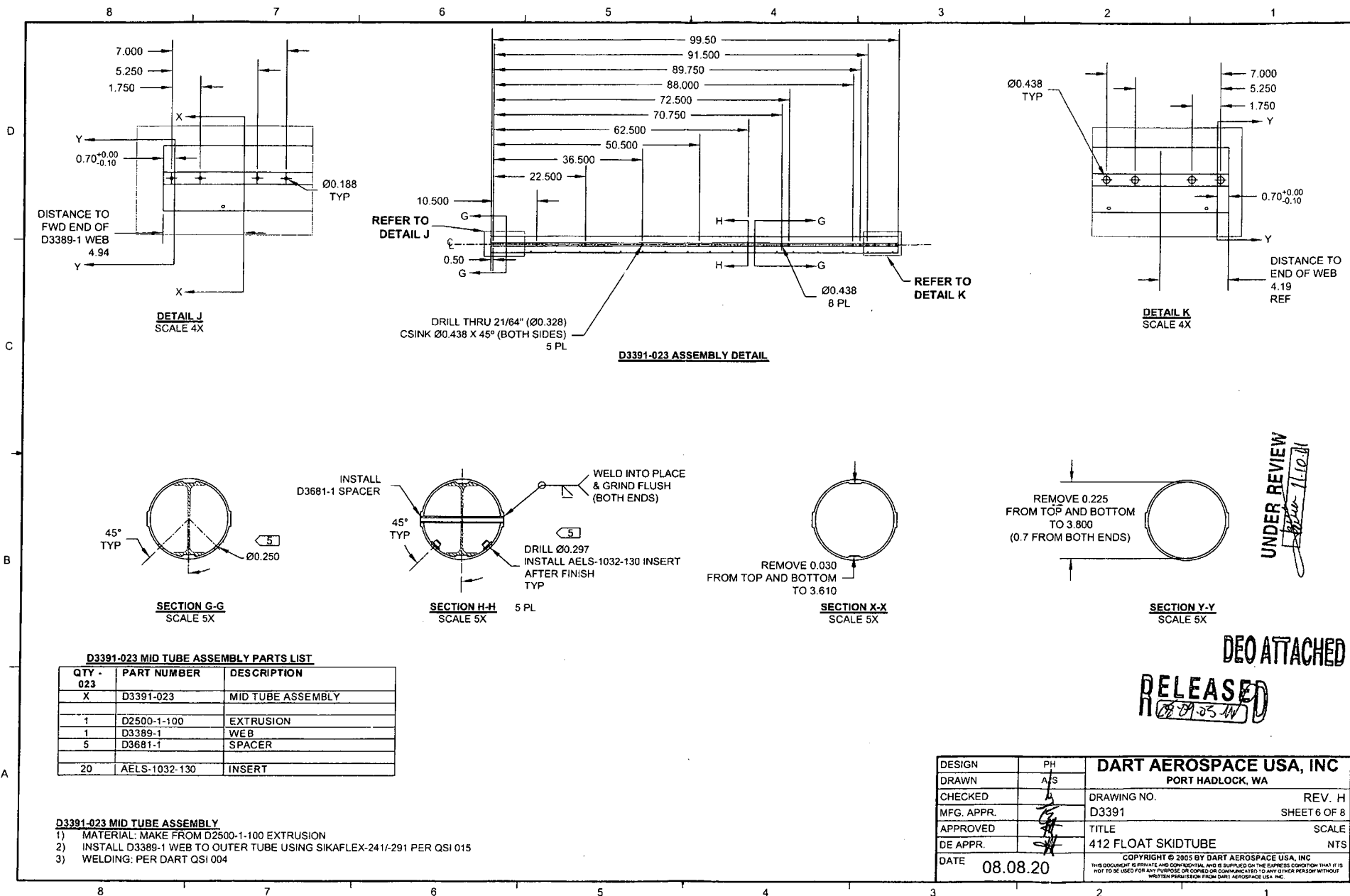
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

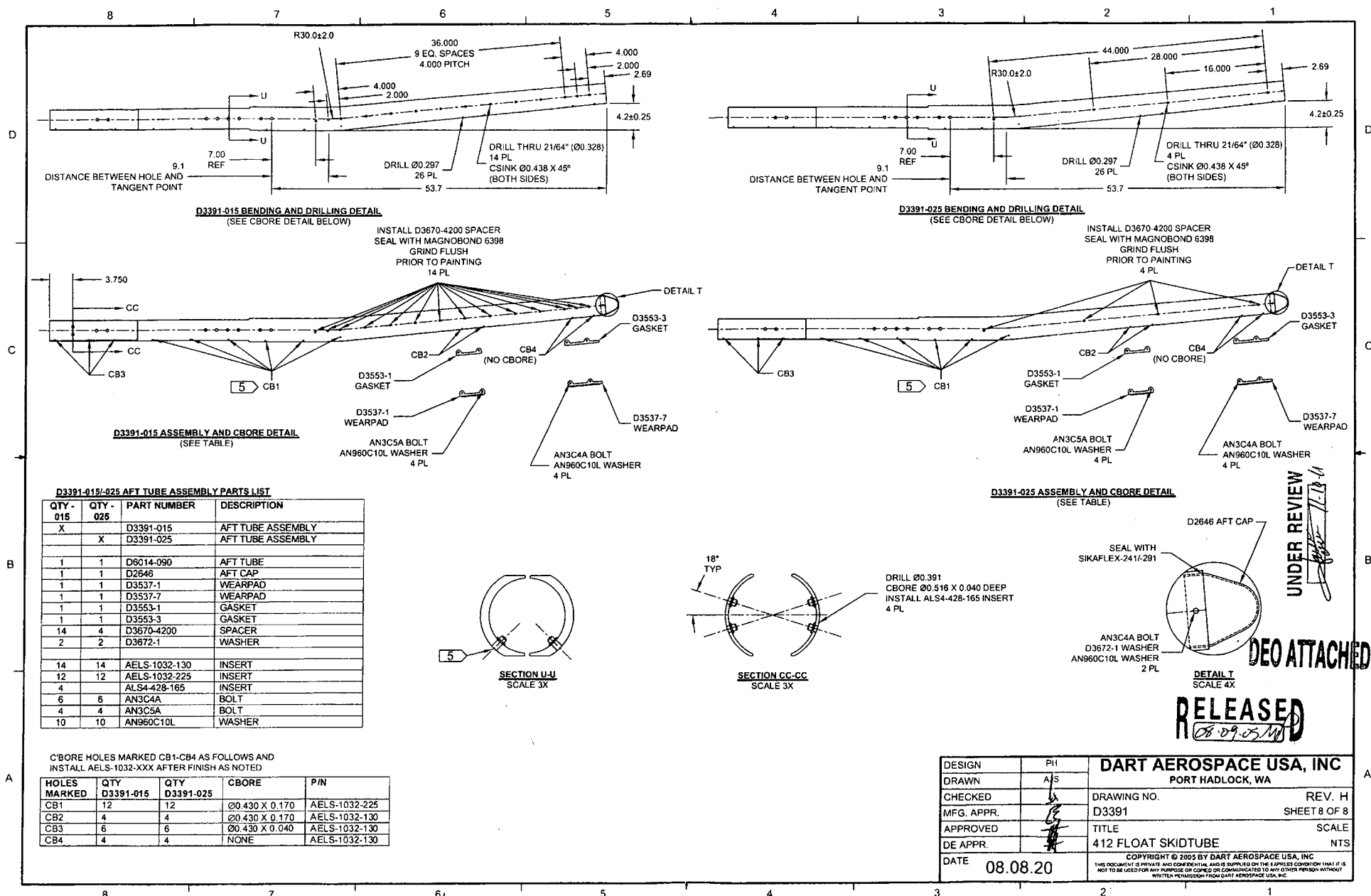
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DRAWING NO. D3391	TITLE 412 FLOAT SKIDTUBE	REV. H	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D3391-H-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>CP</i>	CHECKED <i>h</i>	MFG. APPR. <i>MM</i>	APPROVED <i>MP</i>		DE APPR. <i>MP</i>		
DATE 09.09.23	DATE 09.09.24	DATE 09/09/25	DATE 09/09/30		DATE 09/09/30		

PURPOSE:

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF D3391-041/-043 SKIDTUBES.

CHANGE:

AMEND NOTE 2 OF D3391-041/-043 SKIDTUBE ASSEMBLIES (ZN A6-1, A6-2) AS FOLLOWS:

- 2) ~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH~~
~~AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH~~
 LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS
 OFF POWDER COATING WITH MEK DEGREASER.

RELEASED
 2010-02-02
MP

UNDER REVIEW

11.10.11
 PER PAR 11-125

COPYRIGHT © 2009 BY DART AEROSPACE USA, INC

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS
 NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT
 WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D412-742 REV. D
AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D412-742 REV. 3

REF. CANADIAN STC: SH05-37
REF. FAA STC: SR01583SE
REF. EASA STC: EASA.IM.R.S.01126

PURPOSE:

The purpose of this service instruction is to introduce an alternate wearplate installation for the D412-742-011/-013 Skidtube Installations. The new DSI-9517-011 Wearplate Kit consists of new wearplates destined to replace existing D3564-1/-3 Wearshoes and D3566-1/-3 Gaskets. The components in the DSI-9517-011 Wearplate Kit are as defined in the parts list on sheet 4 of this service instruction.

INSTALLATION PROCEDURE:

Replace D3564-1/-3 Wearshoes and D3566-1/-3 Gaskets with D4095-041/-043 Wearplates Assemblies as follows:

1. Remove existing D3564-1/-3 Wearshoes and D3566-1/-3 Gaskets per Item 32.6.1 of ICA-D412-742. It might be necessary to loosen the aft end of D3564-5 Wearshoe and D3566-5 Gasket.
2. Remove qty.(4) AN4C52A Bolts, D3403-1 Bushings, and qty.(8) D3672-11 Washers as indicated in Figures 1 and 2 of this service instruction.
3. Inspect the skidtube and saddles per Chapter 5 of ICA-D412-742.
4. Seal existing inserts located on both sides of the skidtube in area shown in Figures 1 and 2 of this service instruction using Sikaflex -241/-291 or Proseal 890 or MIL-S-8802 Class 2B sealant.
5. Locate the DSI-9517-011 Wearplate Kit as shown in Figure 1 and 2 of this service instruction.
6. Transfer drill qty.(2) Ø0.438 hole from the skidtube/saddle to the D4095-041/-043 Wearplates Assemblies. Deburr. Touch up finish per Item 5.2.14 of ICA-D412-742 as required.
7. Install the DSI-9517-011 Wearplate Kit using the same AN3C hardware as shown in ICA-D412-742. Torque to 15-25 in-lbs (1.7-2.8 N-m).
8. Install D3403-5 Bushings and AN4C53A Bolts in lieu of D3403-1 Bushings and AN4C52A Bolts removed at step 2 above. Ensure that the nuts on the AN4C Bolts are on the inboard side of the skidtube. Torque to 50-70 in-lbs (5.7-7.9 N-m).
9. Amend weight and balance per the Weight and Balance Table below.

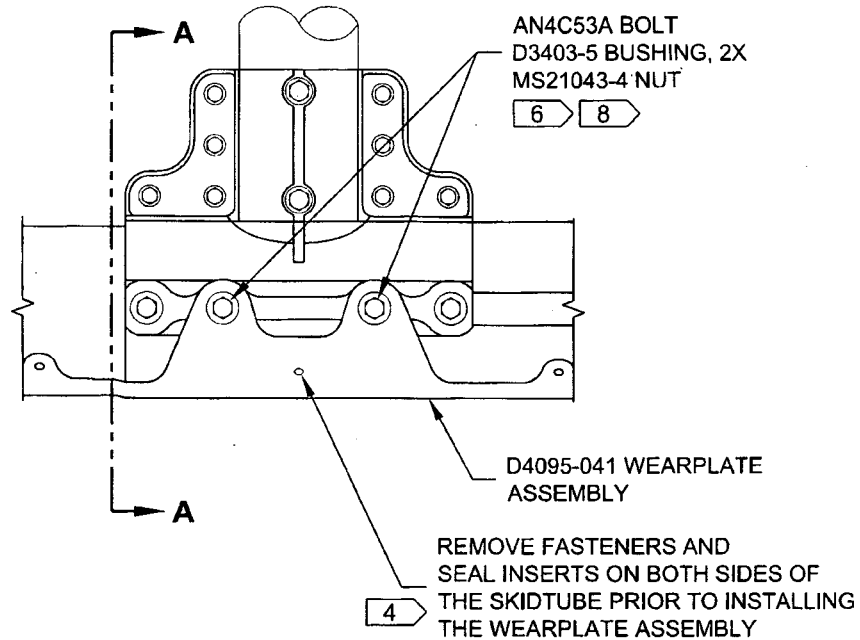
WEIGHT AND BALANCE:

Use the following weight and balance information for DART D412-742-011/-013 skidtube and saddle installations equipped with DSI-9517-011 Wearplate Kit.

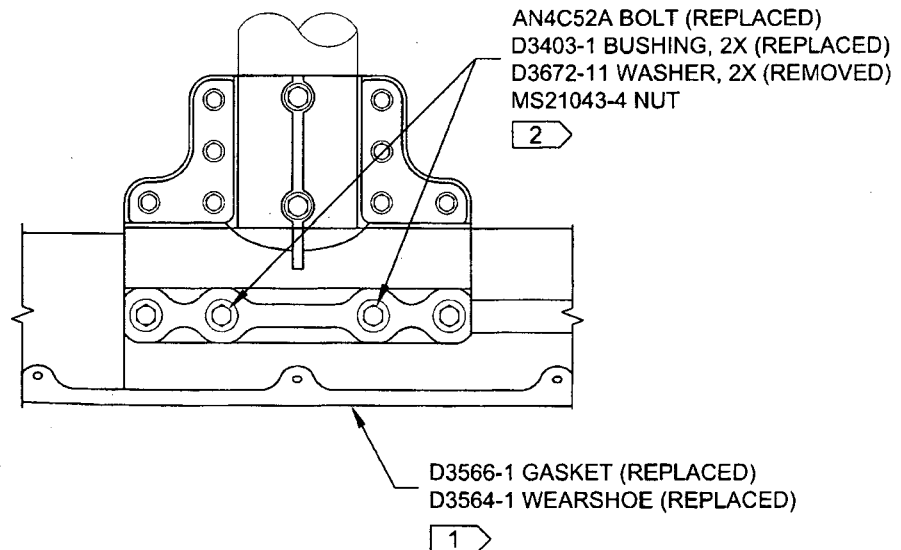
INSTALLATION	WEIGHT	LATERAL		LONGITUDINAL	
		ARM	MOMENT	ARM	MOMENT
D412-742-011 <i>Float Skidtube Installation with DSI-9517-011 Kit Installed</i>	70.0 lb 31.8 kg	±55.0 in ±1.40 m	±3850 in-lb ±44.5 m-kg	130 in 3.3 m	9100 in-lb 105 m-kg
D412-742-013 <i>Float Skidtube Installation with DSI-9517-011 Kit Installed</i>	70.0 lb 31.8 kg	±55.0 in ±1.40 m	±3850 in-lb ±44.5 m-kg	130 in 3.3 m	9100 in-lb 105 m-kg

B	ITEM 21B AND 22B REMOVED FROM PARTS LIST		XDF	11.10.11
A	NEW ISSUE		MB	10.04.21
REV.	DESCRIPTION		BY	DATE
DESIGN			DART AEROSPACE USA, INC KENT, WA	
DRAWN				
CHECKED			DRAWING NO. REV. B	
MFG. APPR.	N/A		DSI 9517 SHEET 1 OF 6	
APPROVED			TITLE SCALE	
DE APPR.			ALTERNATE WEARPLATE KIT NTS	
DATE	11.10.11		COPYRIGHT © 2010 BY DART AEROSPACE USA, INC <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

IS:



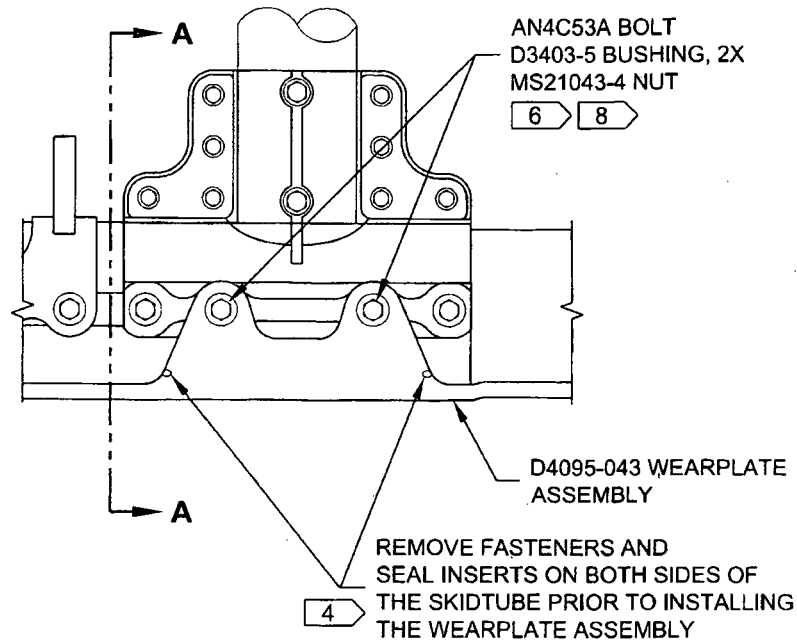
WAS:



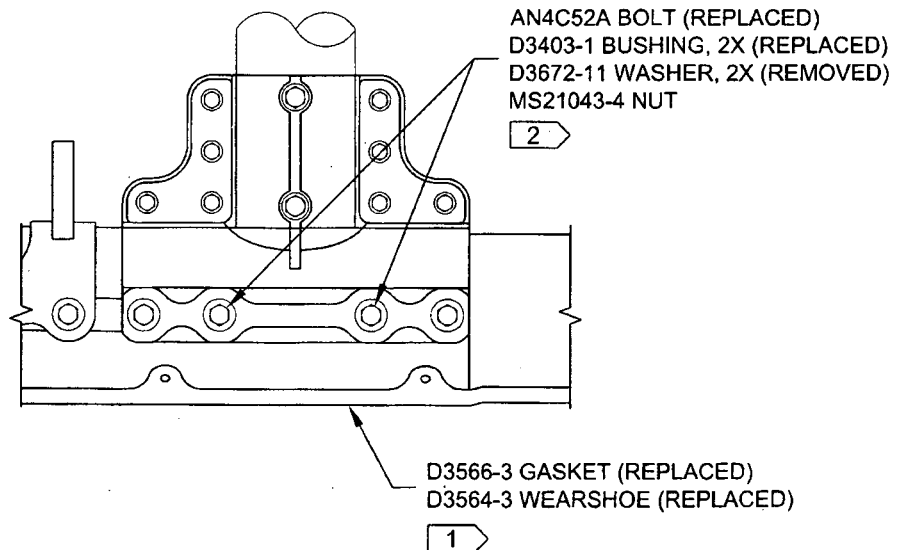
**FIGURE 1: CHANGE AT FORWARD SADDLE LOCATION
WITH DSI-9517-011 KIT INSTALLED**

DESIGN	<i>[Signature]</i>	DART AEROSPACE USA, INC	
DRAWN	XDF	KENT, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	N/A	DSI 9517	SHEET 2 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	ALTERNATE WEARPLATE KIT	NTS
DATE	11.10.11	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

IS:

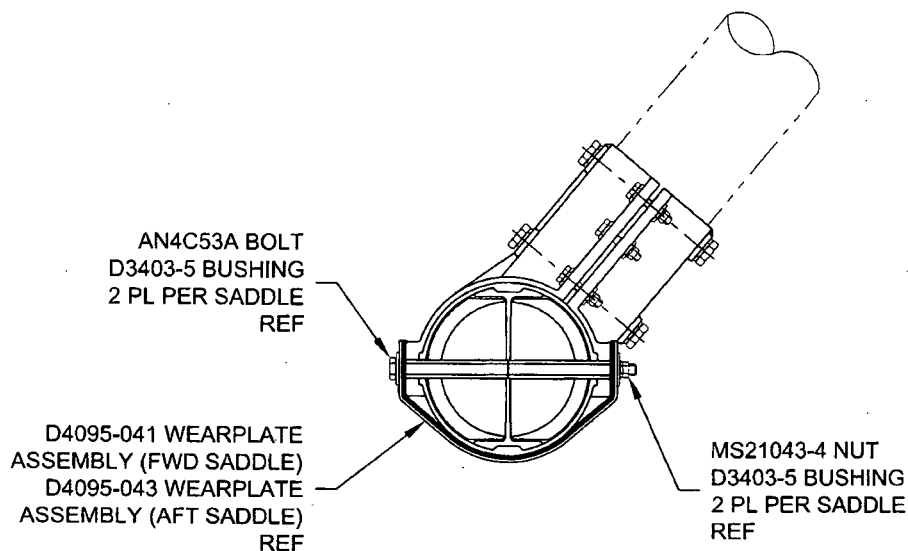


WAS:



**FIGURE 2: CHANGE AT AFT SADDLE LOCATION
WITH DSI-9517-011 KIT INSTALLED**

DESIGN	<i>[Signature]</i>	DART AEROSPACE USA, INC	
DRAWN	XDF	KENT, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	N/A	DSI 9517	SHEET 3 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	ALTERNATE WEARPLATE KIT	NTS
DATE	11.10.11	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	



SECTION A-A

DSI-9517-011 PARTS LIST:

QTY -011	PART NUMBER	DESCRIPTION
X	DSI-9517-011	WEARPLATE KIT
8	D3403-5	BUSHING
1	D4095-041	WEARPLATE ASSEMBLY
1	D4095-043	WEARPLATE ASSEMBLY
4	AN4C53A	BOLT

DESIGN	<i>[Signature]</i>	DART AEROSPACE USA, INC	
DRAWN	XDF	KENT, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	N/A	DSI 9517	SHEET 4 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	ALTERNATE WEARPLATE KIT	NTS
DATE	11.10.11	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

THE PARTS LISTS IN SECTION 32.15 OF ICA-D412-742 (PAGES 53 AND 55) AND SECTION 5.1 OF IIN-D412-742 (PAGES 16 AND 17) ARE AMENDED AS FOLLOWS WHEN OPTIONAL DSI-9517-011 KIT IS INSTALLED:

32.15 D412-742-011 (PMA/OEM) FLOAT SKIDTUBE INSTALLATION PARTS LIST (ICA-D412-742)
5.1 D412-742-011 (PMA/OEM) FLOAT SKIDTUBE INSTALLATION PARTS LIST (IIN-D412-742)

Item	QTY -011	QTY -041	QTY -015	PART NUMBER	DESCRIPTION
	X			D412-742-011	FLOAT SKIDTUBE INSTALLATION
	1	X		D412-742-041	FLOAT SKIDTUBE
	1		X	D412-742-015	ELECTRIC STEP KIT

IS:

3		10		AN3C6A	BOLT (REMOVED QTY.2)
4		4		AN3C7A	BOLT (REMOVED QTY.4)
5		38		AN960C10L	WASHER (REMOVED QTY.6)
21A		1		D4095-041	WEARPLATE ASSEMBLY
22A		1		D4095-043	WEARPLATE ASSEMBLY
46	8			D3403-1	BUSHING (REPLACED QTY.4 WITH D3403-5)
46A	8			D3403-5	BUSHING (REPLACES QTY.4 D3403-1)
49	4			AN4C52A	BOLT (REPLACED QTY.4 WITH AN4C53A)
49A	4			AN4C53A	BOLT (REPLACES QTY.4 AN4C52A)
53	8			D3672-11	WASHER (REMOVED QTY.8)

WAS:

3		12		AN3C6A	BOLT
4		8		AN3C7A	BOLT
5		44		AN960C10L	WASHER
21A		1		D3564-1	WEARPLATE
21B		1		D3564-3	WEARPLATE
22A		1		D3566-1	GASKET
22B		1		D3566-3	GASKET
46	16			D3403-1	BUSHING
49	8			AN4C52A	BOLT
53	16			D3672-11	WASHER

DESIGN		DART AEROSPACE USA, INC	
DRAWN	XDF	KENT, WA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.	N/A	DSI 9517	SHEET 5 OF 6
APPROVED		TITLE	SCALE
DE APPR.		ALTERNATE WEARPLATE KIT	NTS
DATE	11.10.11	<small>COPYRIGHT © 2010 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

THE PARTS LISTS IN SECTION 32.16 OF ICA-D412-742 (PAGES 57 AND 59) AND SECTION 5.2 OF IIN-D412-742 (PAGES 18 AND 19) ARE AMENDED AS FOLLOWS WHEN OPTIONAL DSI-9517-011 KIT IS INSTALLED:

32.16 D412-742-013 (APICAL TRI-BAG) FLOAT SKIDTUBE INSTALLATION PARTS LIST (ICA-D412-742)

5.2 D412-742-013 (APICAL TRI-BAG) FLOAT SKIDTUBE INSTALLATION PARTS LIST (IIN-D412-742)

Item	QTY -013	QTY -043	PART NUMBER	DESCRIPTION
	X		D412-742-013	FLOAT SKIDTUBE INSTALLATION
	1	X	D412-742-043	FLOAT SKIDTUBE

IS:

3		10	AN3C6A	BOLT (REMOVED QTY.2)
4		4	AN3C7A	BOLT (REMOVED QTY.4)
5		38	AN960C10L	WASHER (REMOVED QTY.6)

21A	1		D4095-041	WEARPLATE ASSEMBLY
22A	1		D4095-043	WEARPLATE ASSEMBLY

46	8		D3403-1	BUSHING (REPLACED QTY.4 WITH D3403-5)
46A	8		D3403-5	BUSHING (REPLACES QTY.4 D3403-1)

49	4		AN4C52A	BOLT (REPLACED QTY.4 WITH AN4C53A)
49A	4		AN4C53A	BOLT (REPLACES QTY.4 AN4C52A)

53	8		D3672-11	WASHER (REMOVED QTY.8)
----	---	--	----------	------------------------

WAS:

3		12	AN3C6A	BOLT
4		8	AN3C7A	BOLT
5		44	AN960C10L	WASHER

21A		1	D3564-1	WEARPLATE
21B		1	D3564-3	WEARPLATE
22A		1	D3566-1	GASKET
22B		1	D3566-3	GASKET

46	16		D3403-1	BUSHING
----	----	--	---------	---------

49	8		AN4C52A	BOLT
----	---	--	---------	------

53	16		D3672-11	WASHER
----	----	--	----------	--------

DESIGN	<i>[Signature]</i>	DART AEROSPACE USA, INC	
DRAWN	XDF	KENT, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	N/A	DSI 9517	SHEET 6 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	ALTERNATE WEARPLATE KIT	NTS
DATE	11.10.11	<small>COPYRIGHT © 2010 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

Linda Lacelle

From: Chris Provencal <cprovencal@dartaero.com>
Sent: November-08-11 11:32 AM
To: 'L Lacelle'
Cc: Mike Petsche; Xavier Faria; David Shepherd; Johnston, Kim
Subject: D412-742-xx w/os

FYI:

I will update all w/o's made with the new D3391 dwg to D412-742-013 CHG 007 and D412-742-043 CHG 005. Parts made to the old D3391 dwg will remain at CHG 006 and 004 respectively, but will have the DSI kit pre-installed. The w/o's for the old tubes will need to be re-worked per DSI 9517 Rev. B, with holes being plugged with sikaflex and such.

I've put the bluefile under review. There will be a new DSI 9517 Rev. B that will incorporate CHG # information., which the current DSI is lacking. When the document is ready, we'll do a new ECN to ensure all the CHG #'s get updated for all the paperwork.

-Chris

Chris Provencal

From: David Shepherd <dshepherd@dartaero.com>
Sent: Friday, November 18, 2011 3:21 PM
To: 'Chris Provencal'
Cc: 'Mike Petsche'; 'L Lacelle'
Subject: RE: Frankentribeams

I agree that these should be shipped as CHG 007.

David

From: Chris Provencal [<mailto:cprovencal@dartaero.com>]
Sent: November-18-11 12:17 PM
To: David Shepherd
Cc: Mike Petsche; 'L Lacelle'
Subject: Frankentribeams

David,

RE: D412-742-013

We were planning on sending two tri-beams at the old change number with the DSI wearplate kit installed. The customer wants all new wearplates. Additionally, one of the aft tubes was scrapped due to excessive machining marks on the ID, so it is replaced with a new-style tube.

This basically means we'd be shipping CHG 006 tubes, with CHG 007 wearplates, and one CHG 007 aft tube on one of the tubes. This isn't really covered by the DSI. I think that these should be shipped as CHG 007 (since from a customer standpoint, they are more functionally a CHG 007) with a deviation that the tubes have additional holes filled per the DSI. Is this acceptable?

-Chris

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries